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FIG. 1

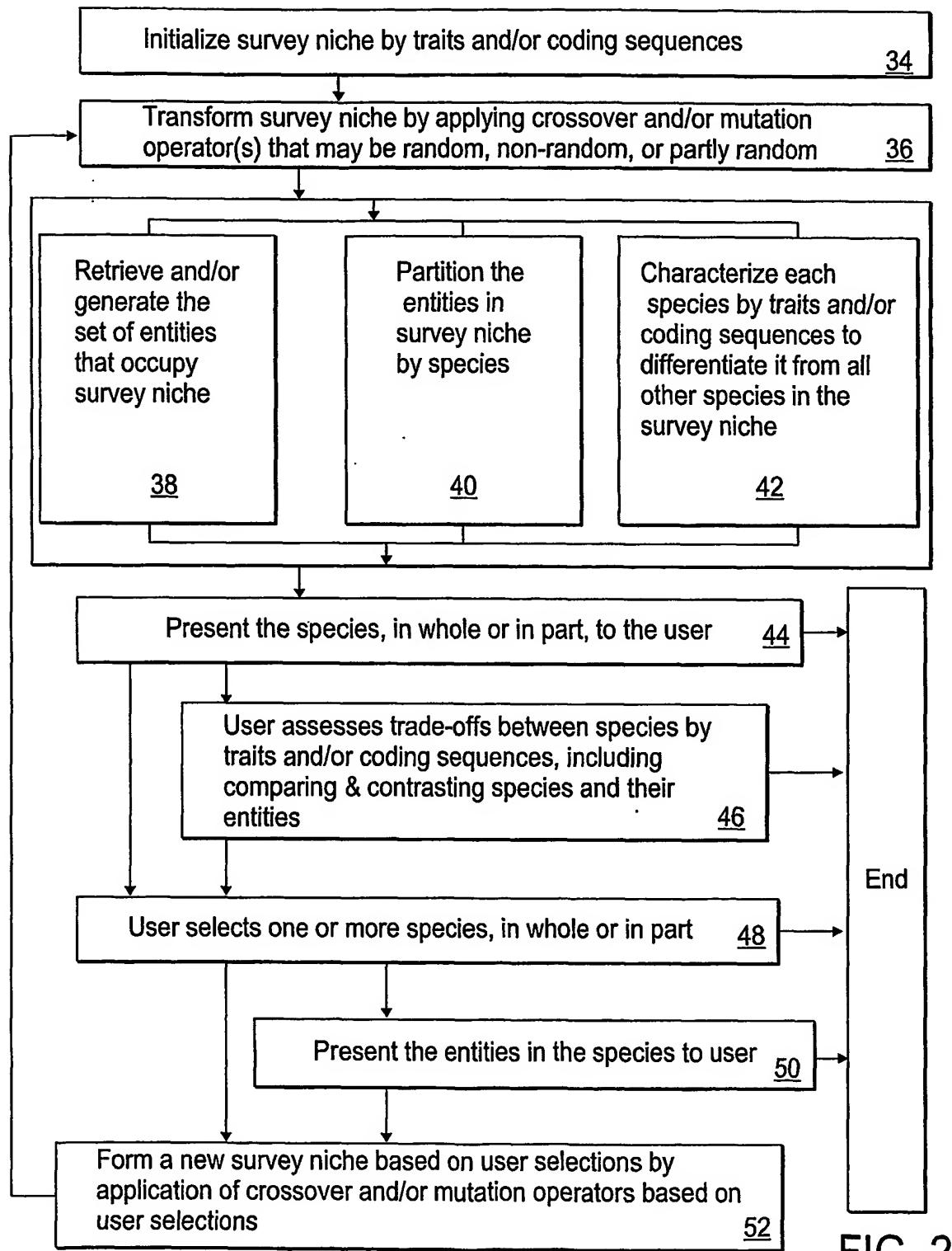


FIG. 2

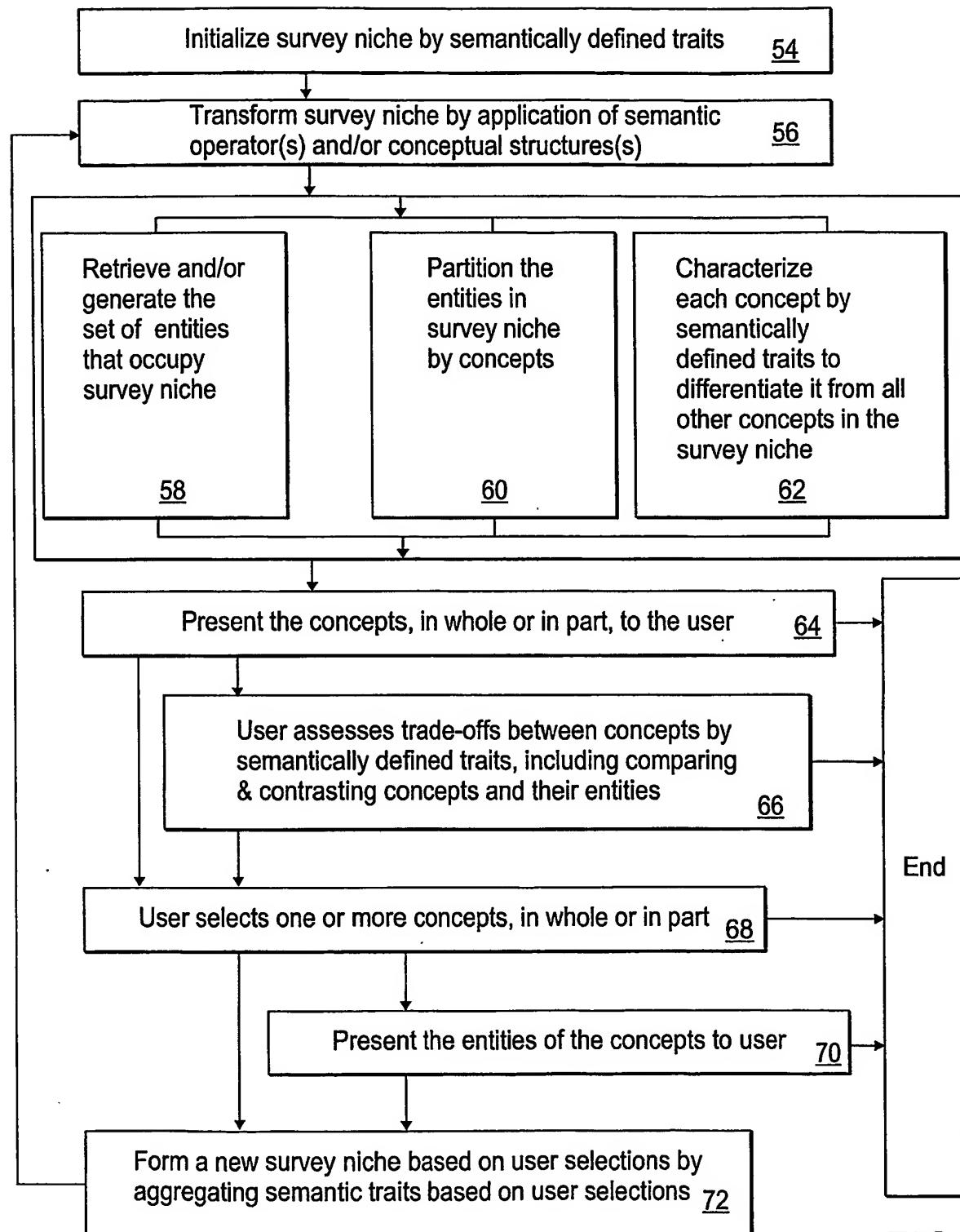


FIG. 3

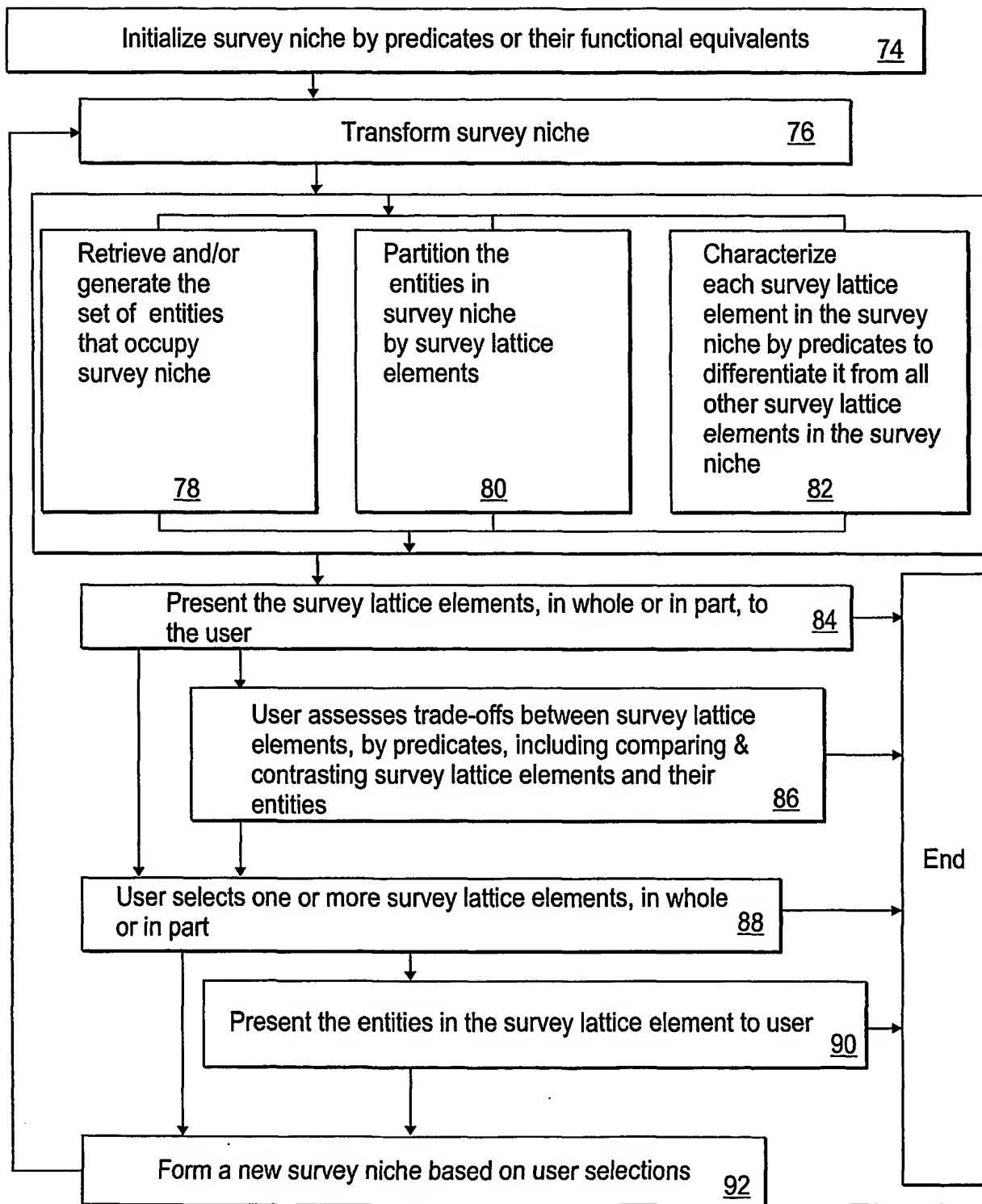


Fig. 4

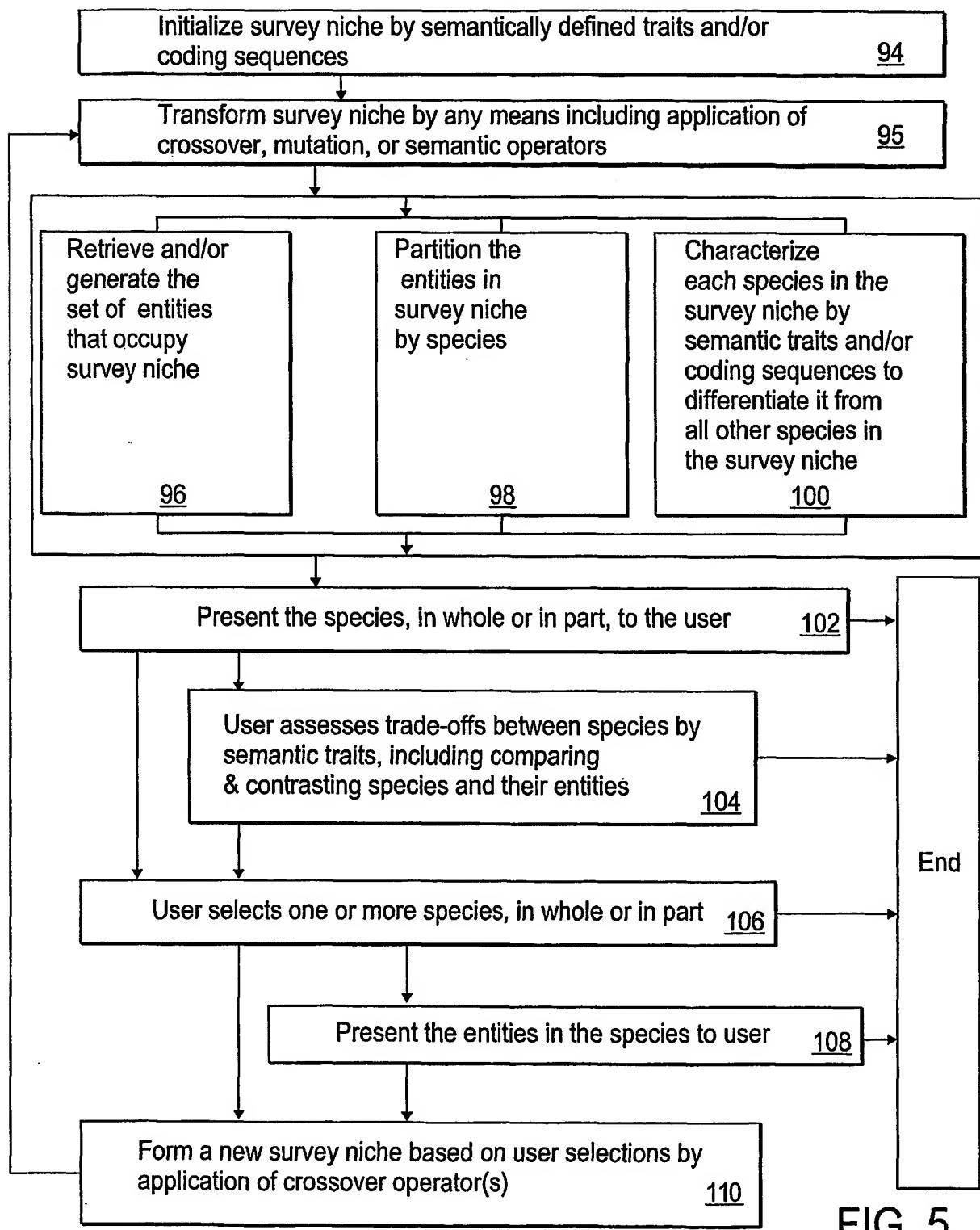


FIG. 5

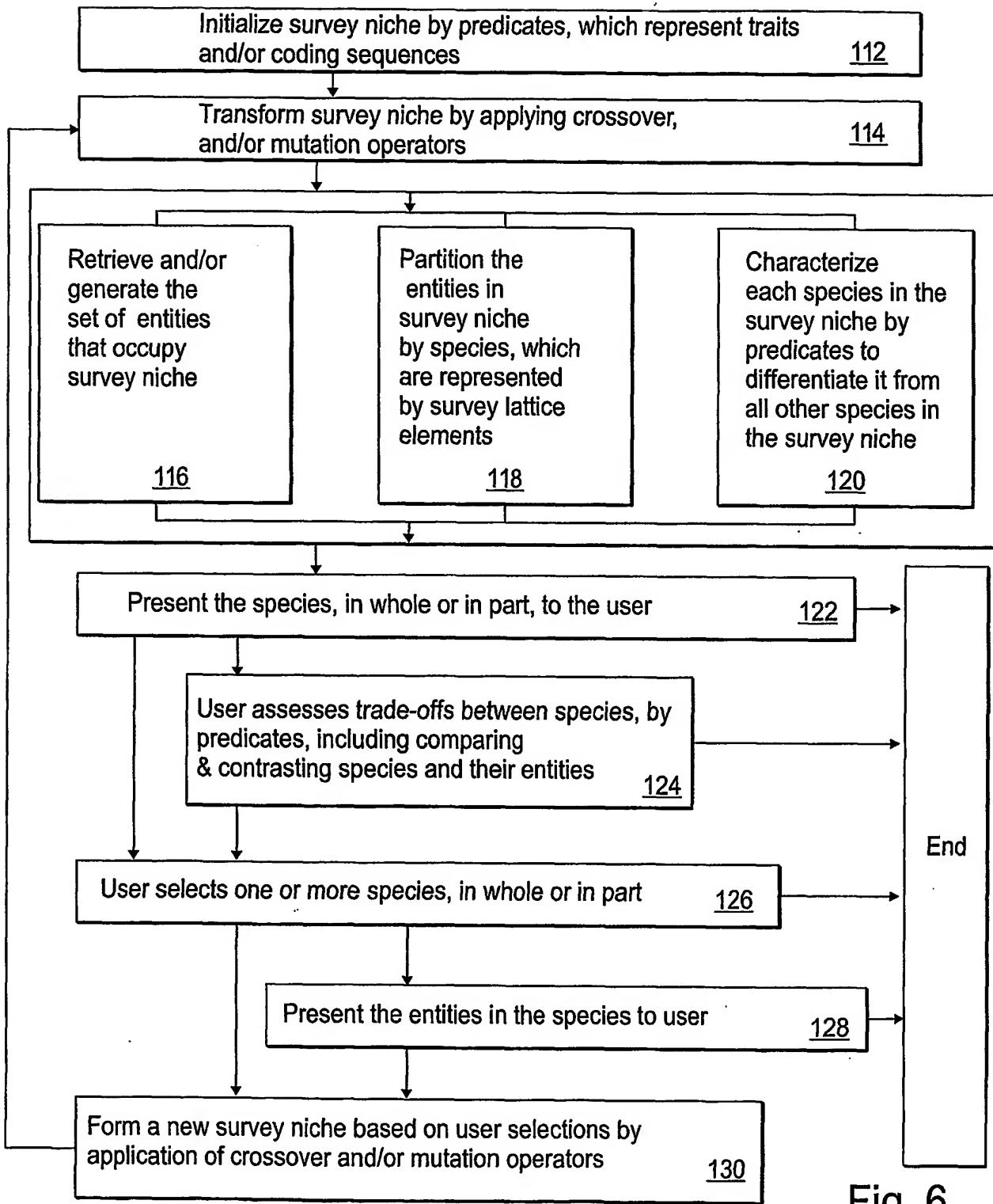


Fig. 6

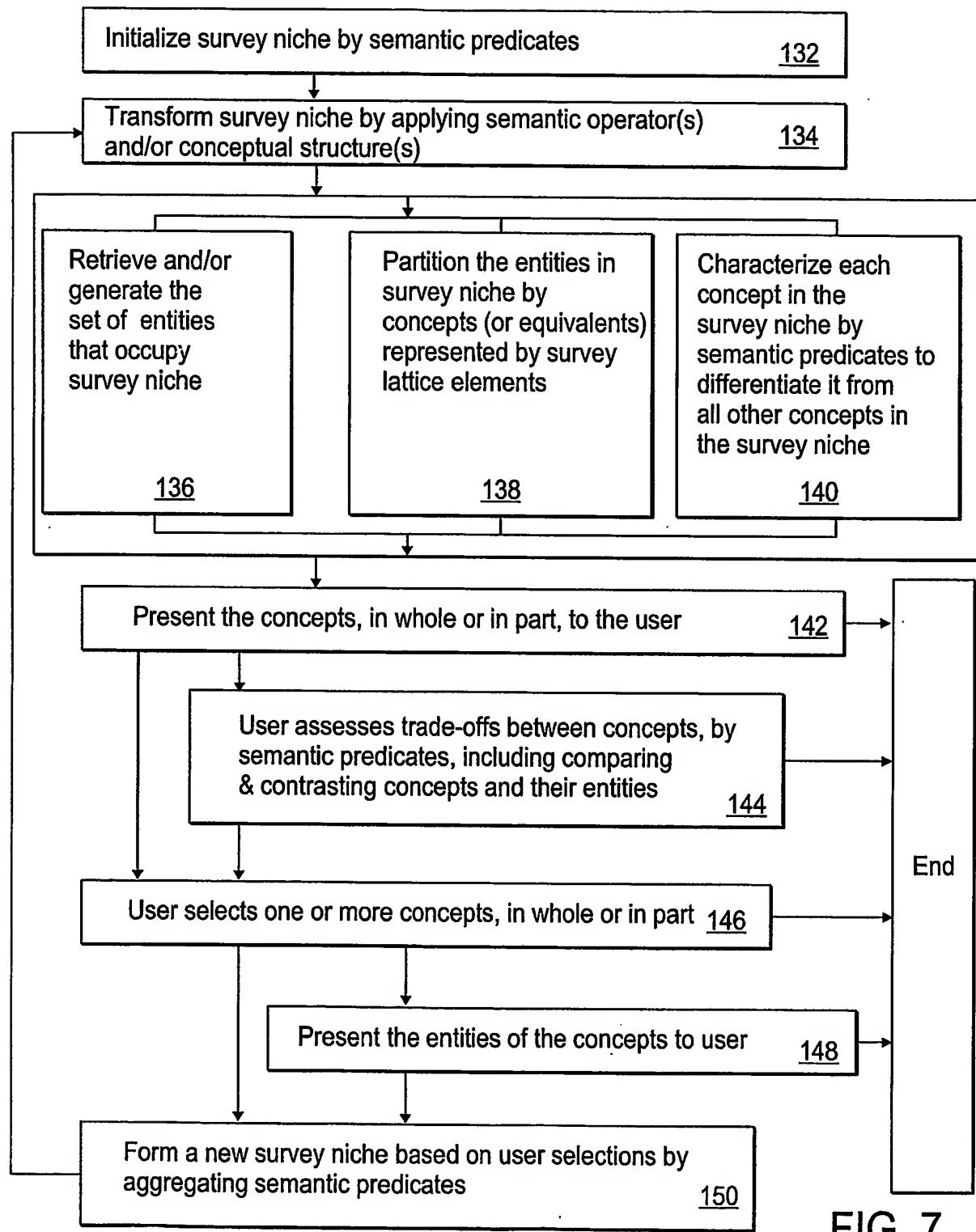


FIG. 7

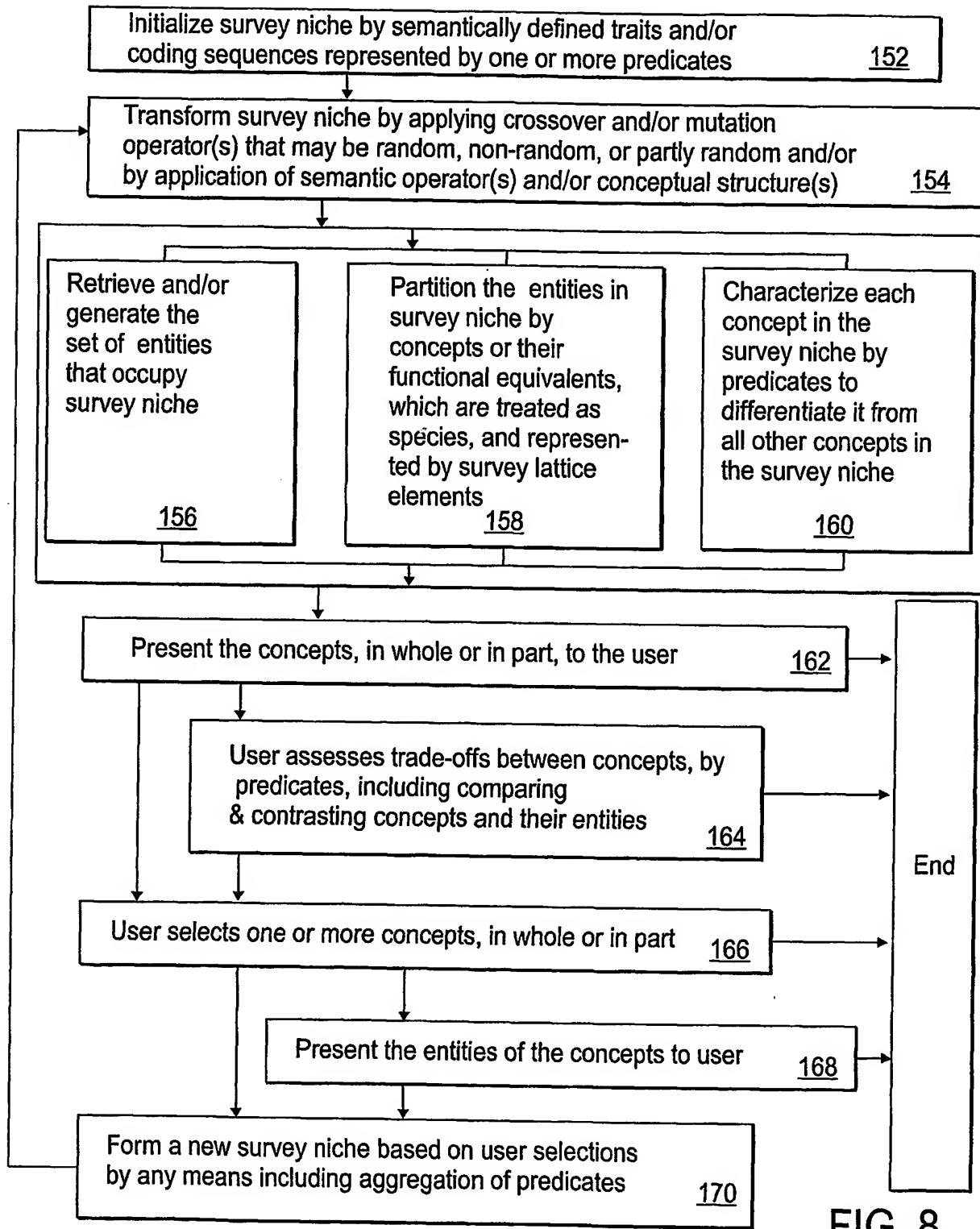


FIG. 8

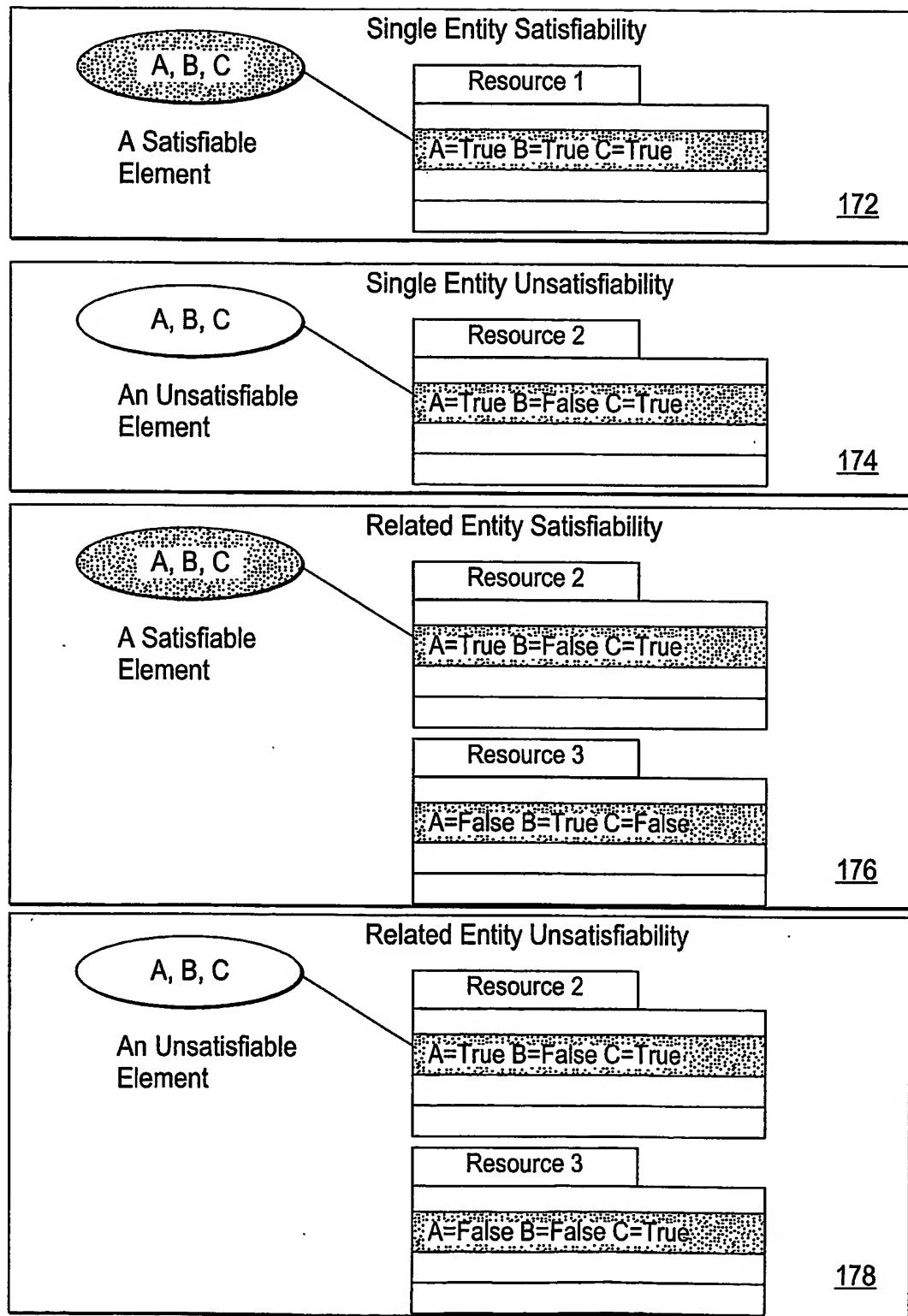


FIG. 9

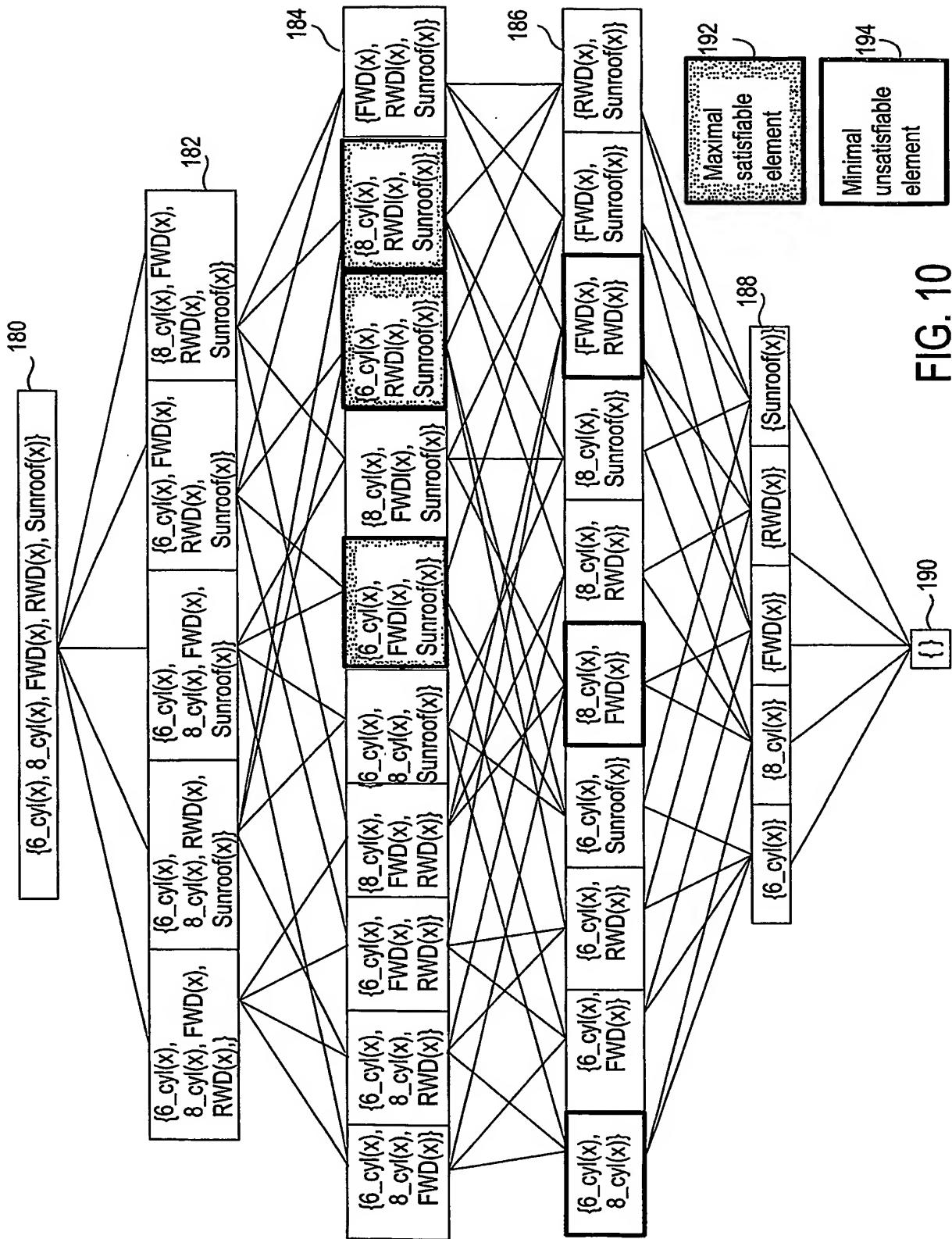


FIG. 10

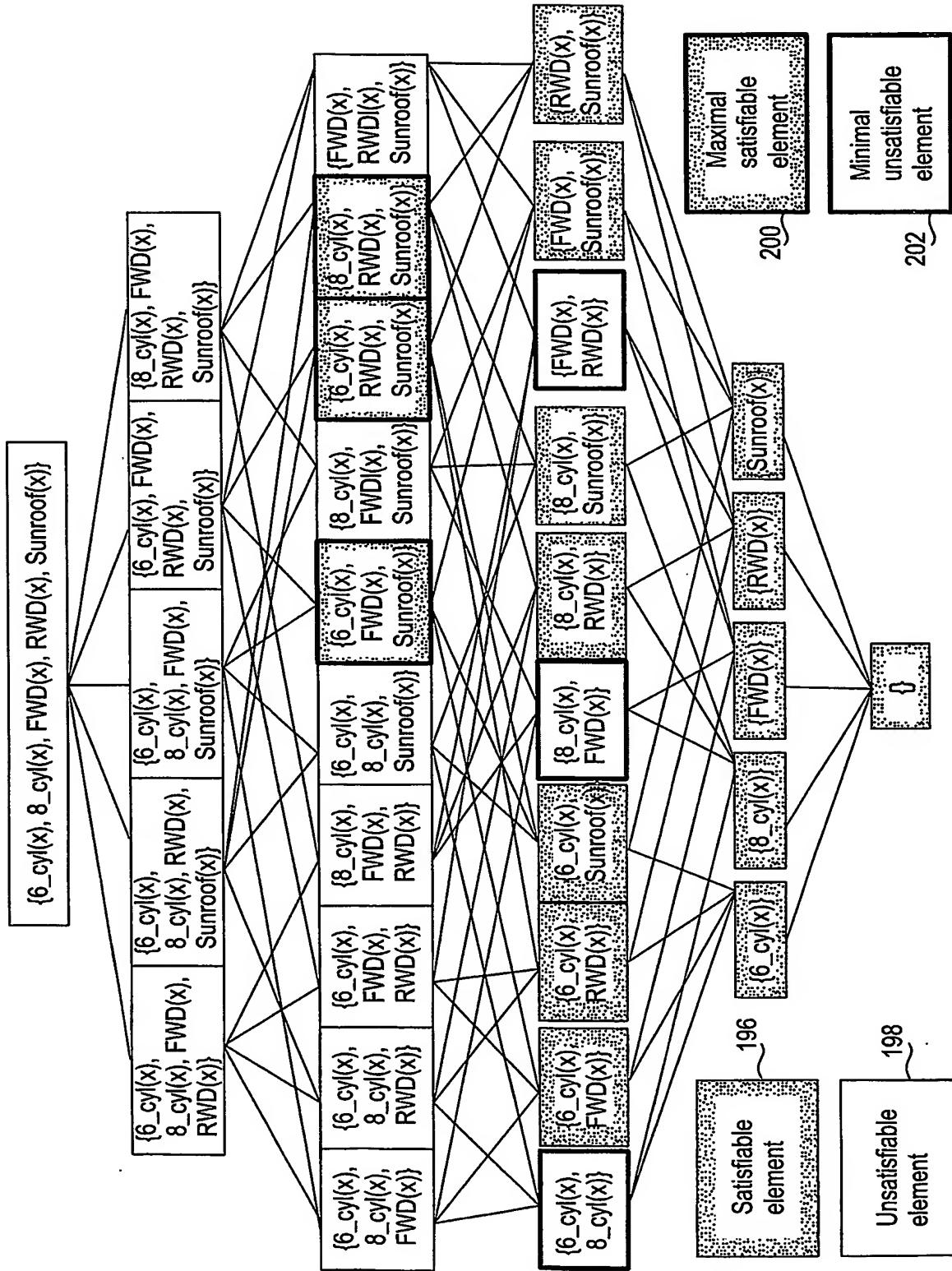


FIG. 11

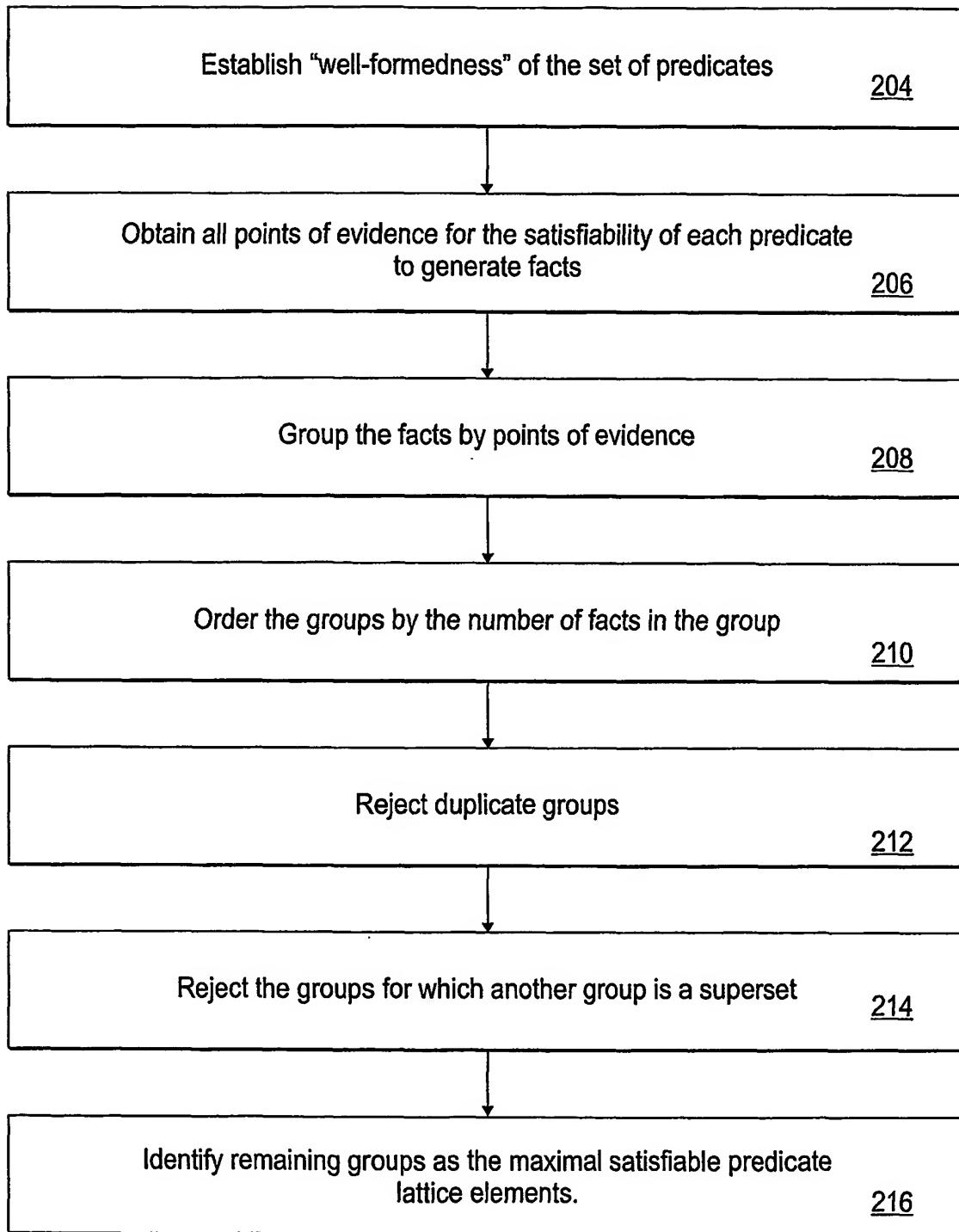


FIG. 12

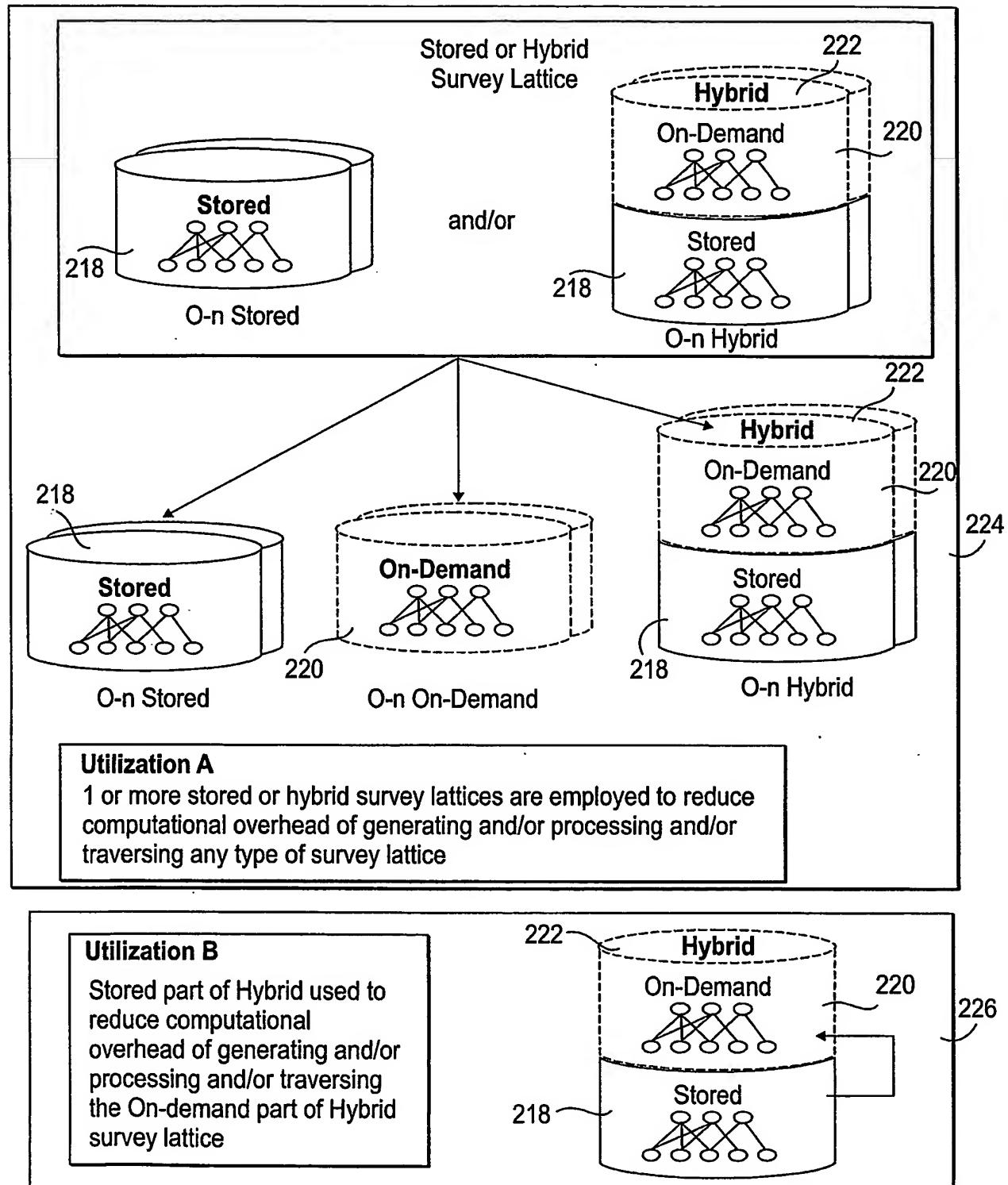
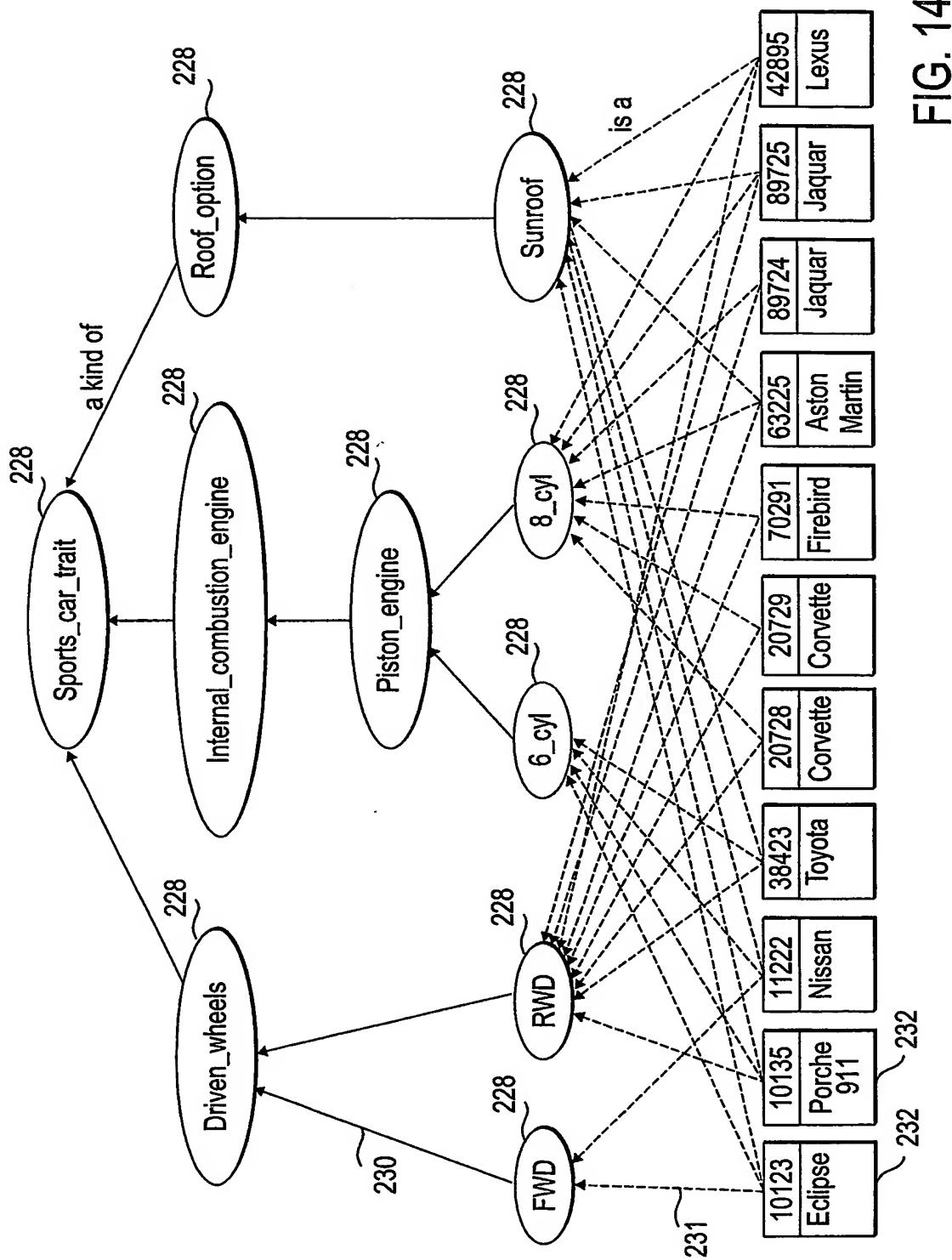
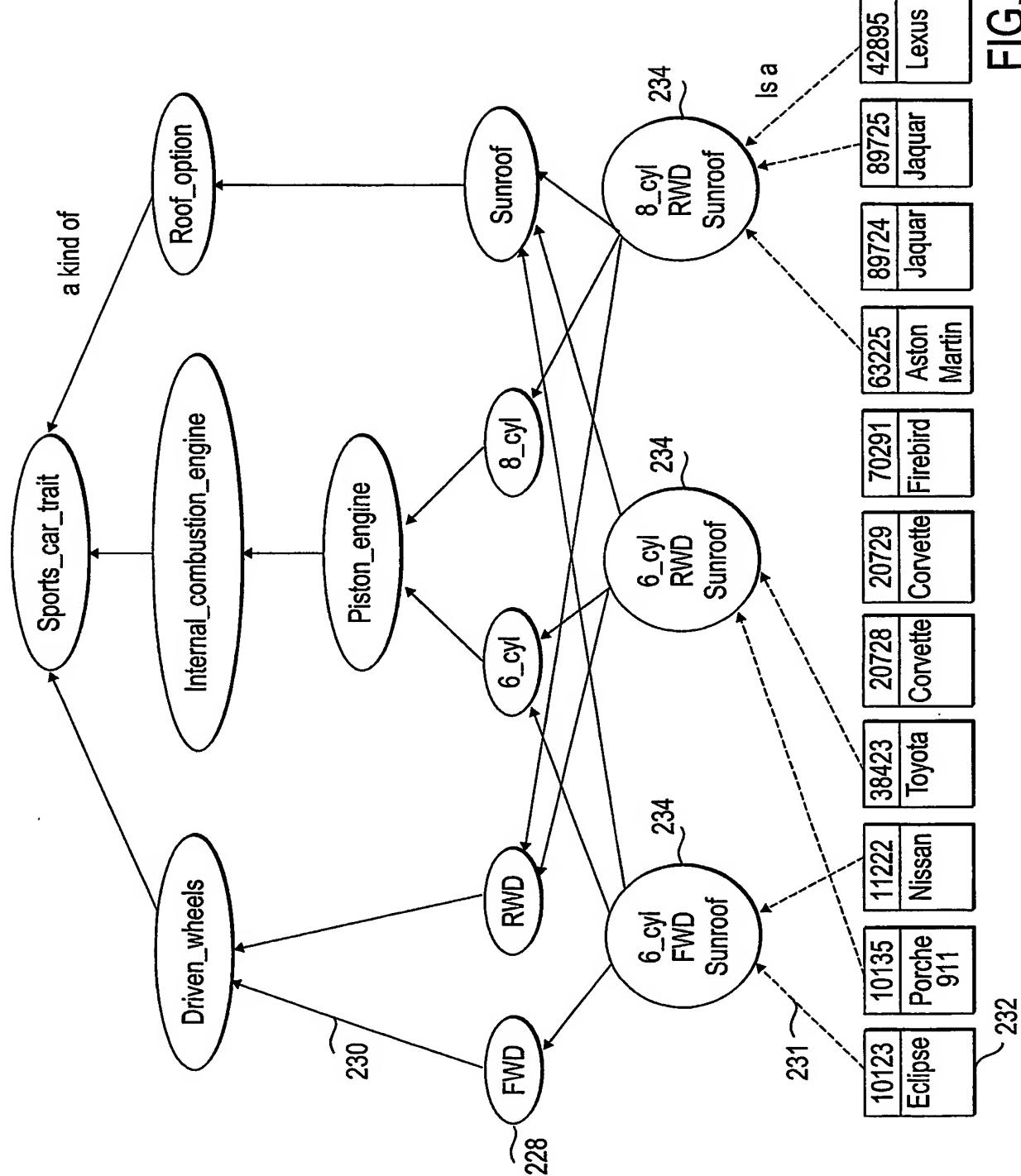


FIG. 13





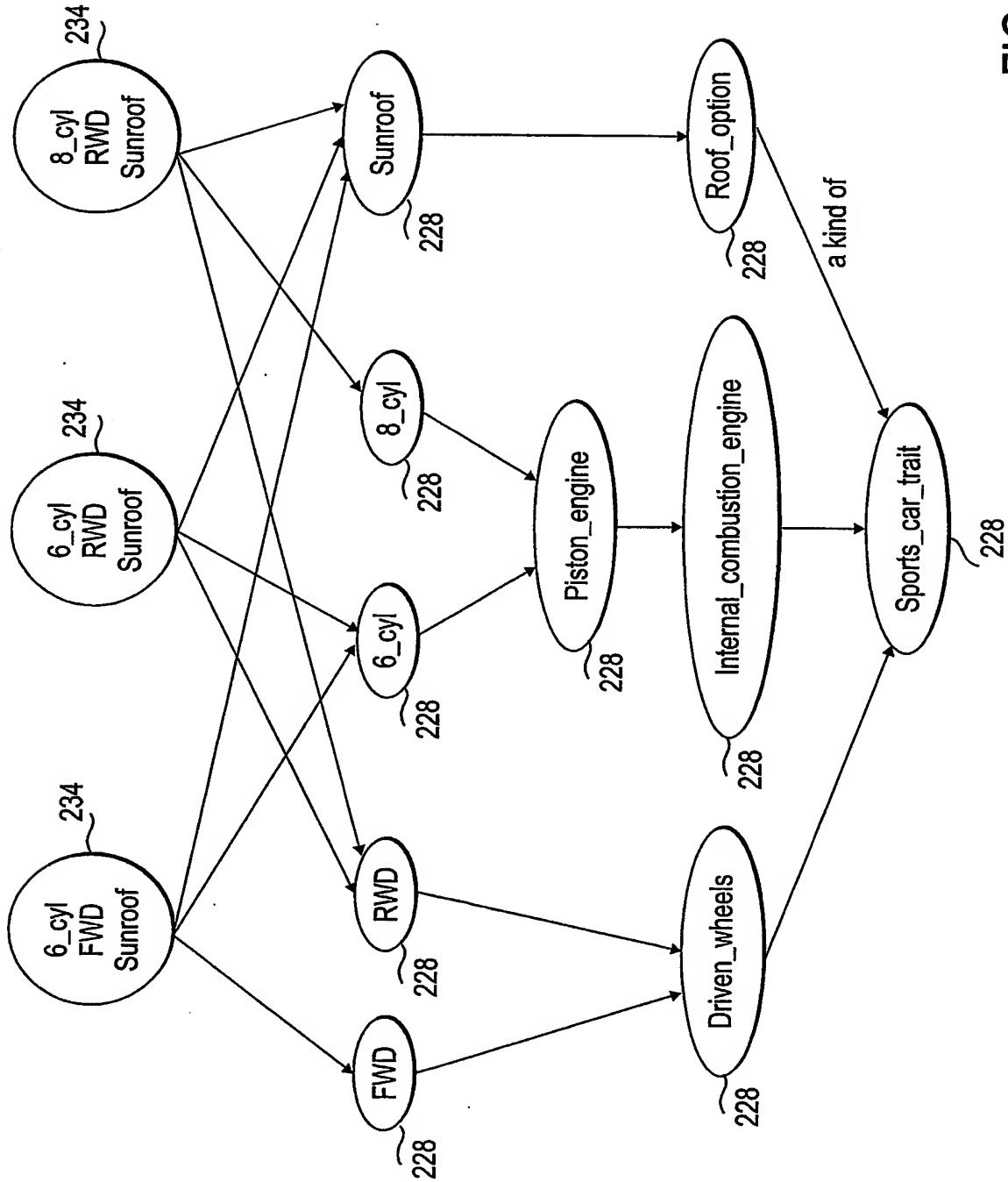


FIG. 16

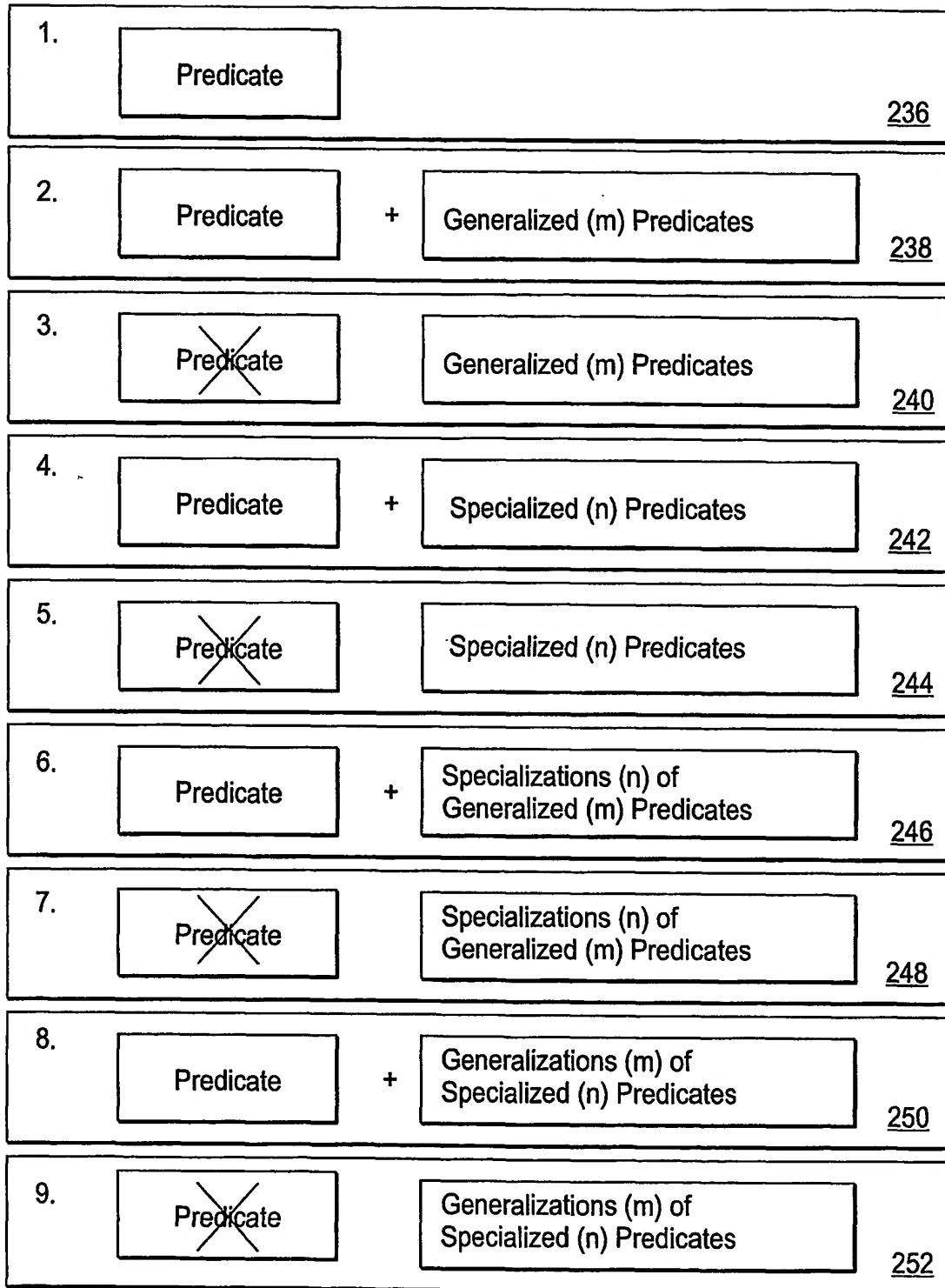
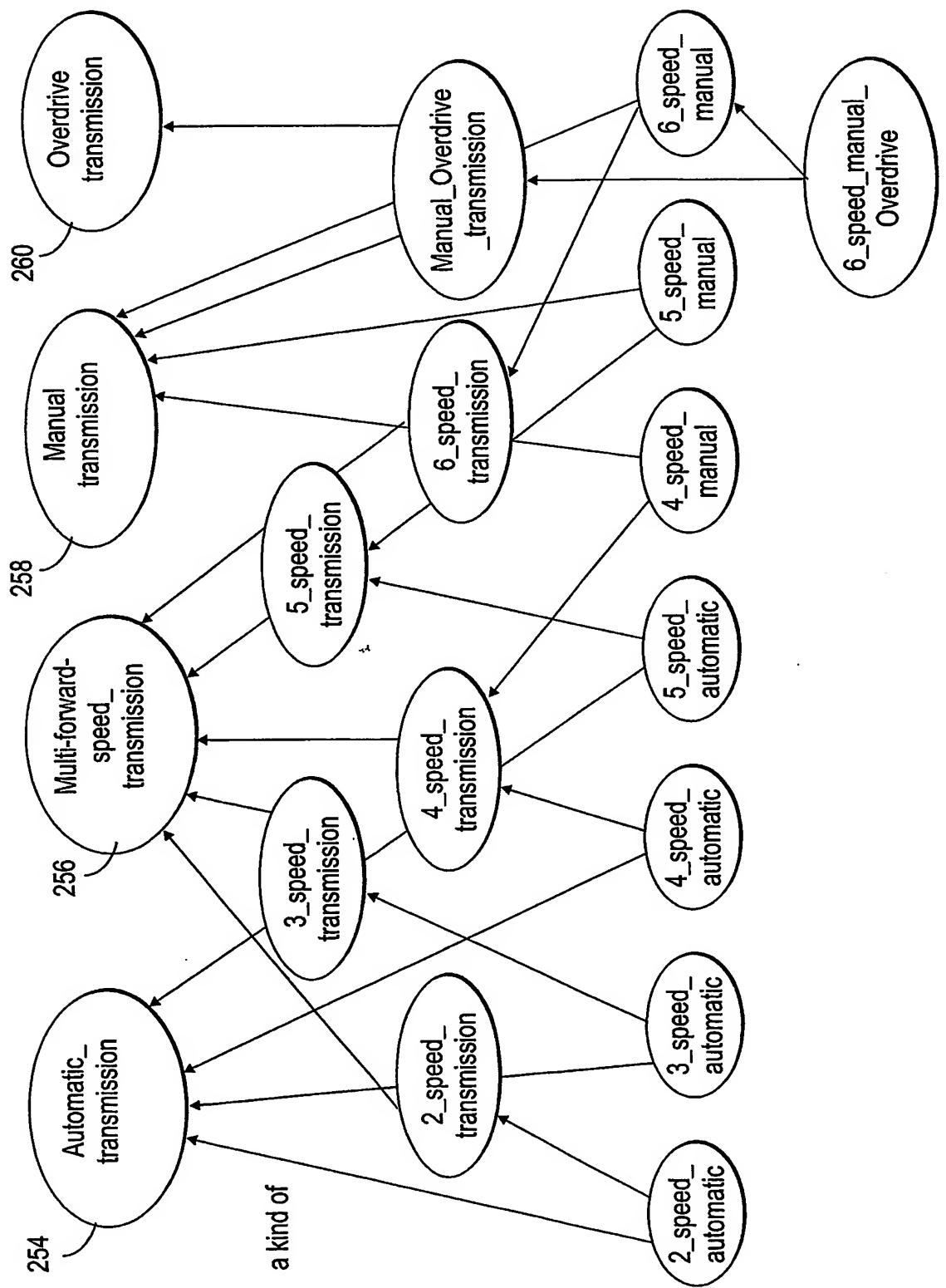


FIG. 17

**FIG. 18**

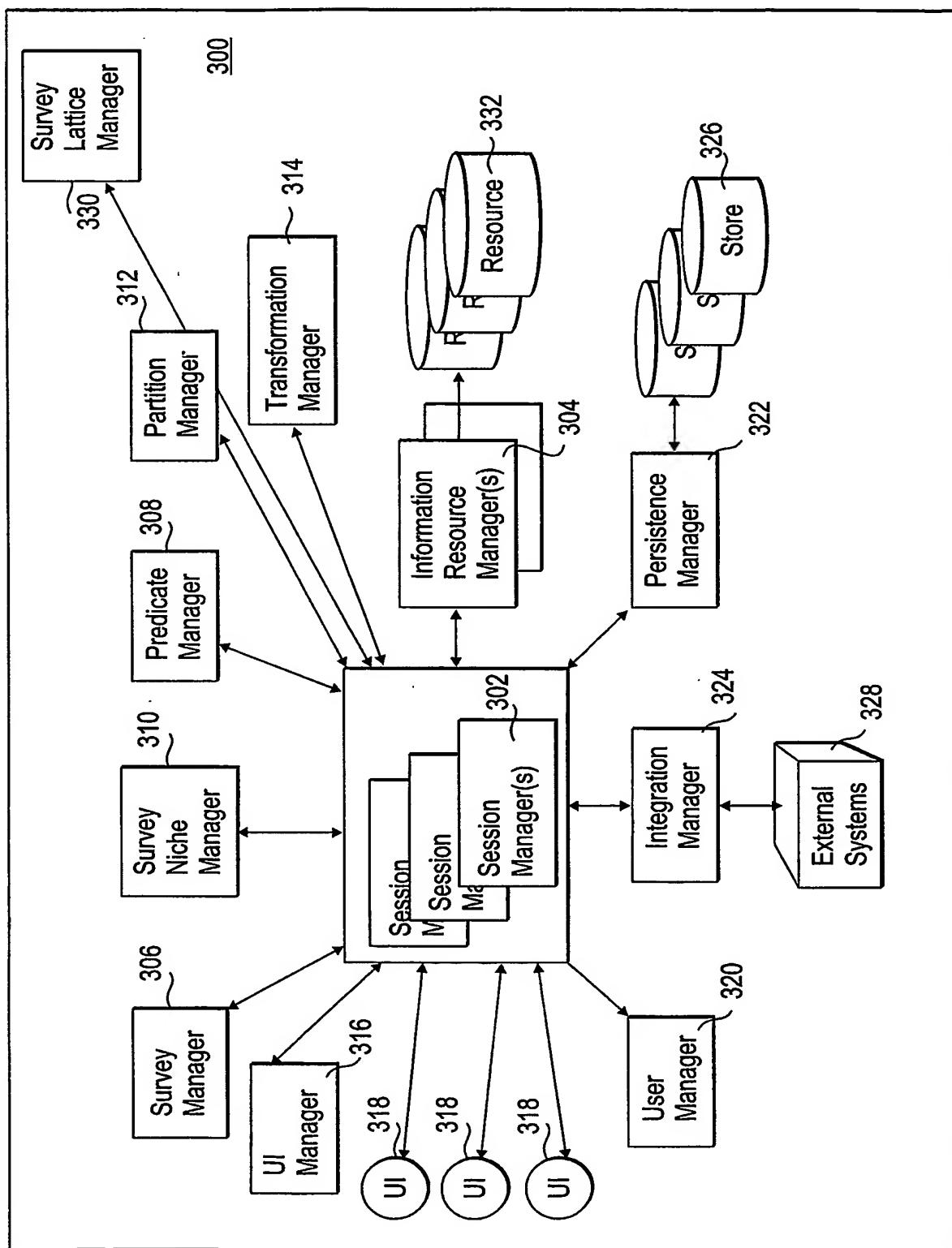


FIG. 19

FIG. 20

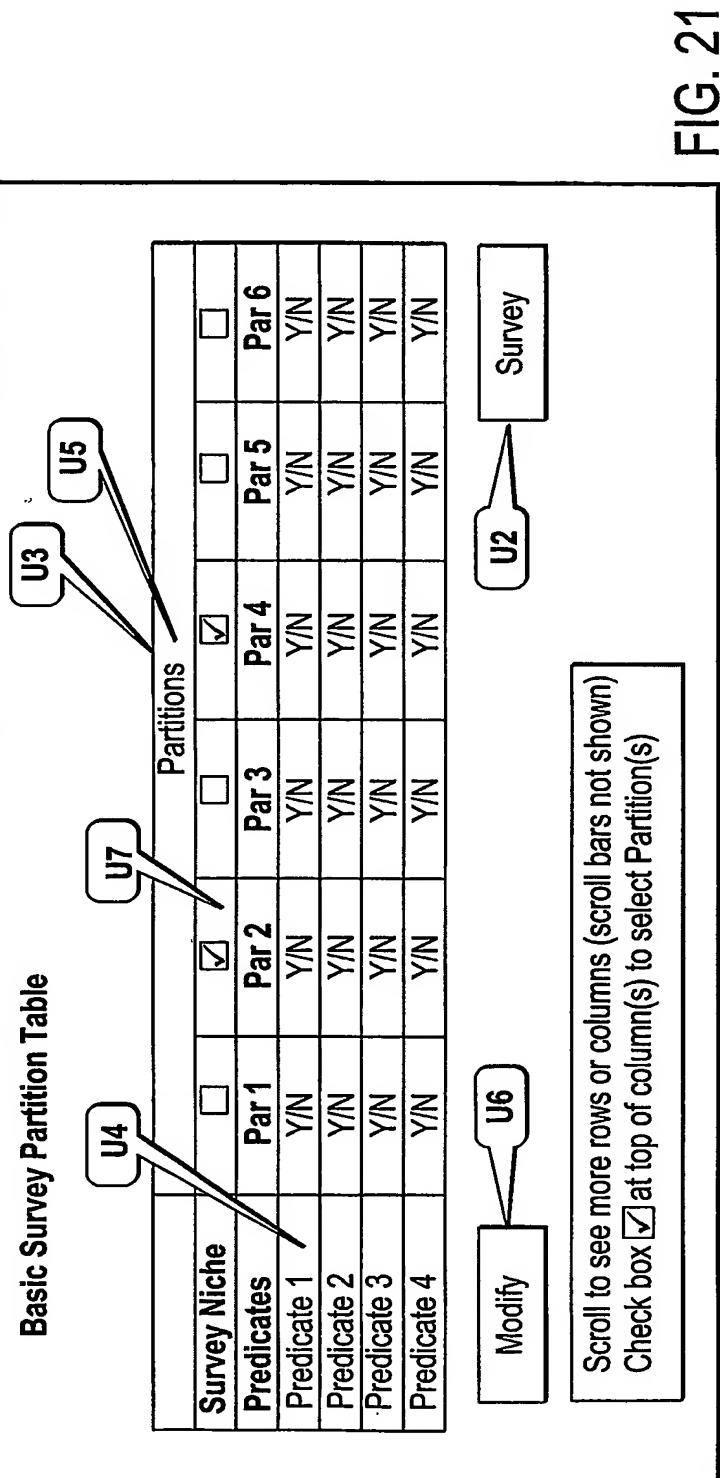
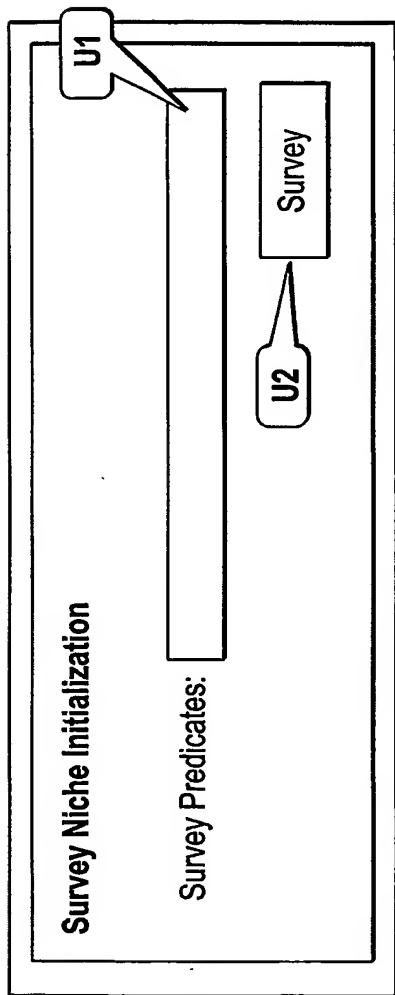
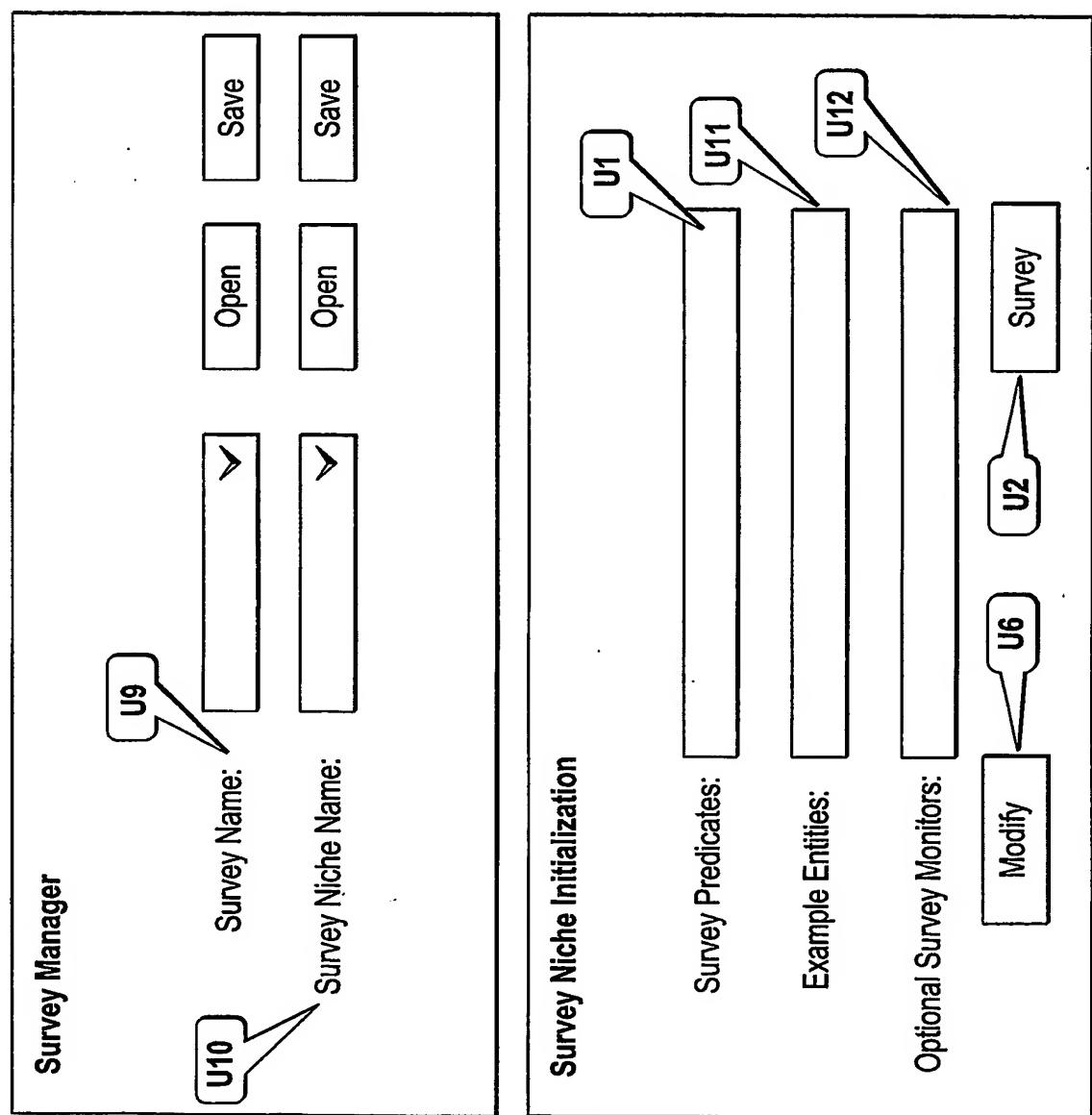


FIG. 21

Enhanced Survey Table						
Survey Niche	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Partitions					
Predicates	Par 1	Par 2	Par 3	Par 4	Par 5	Par 6
Predicate 1	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Predicate 2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Predicate 3	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Predicate 4	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Monitors						
# of Entities	Value	Value	Value	Value	Value	Value
Survey Monitor 1	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction
Survey Monitor 2	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction	Null/Stats/ abstraction
Entities for Selected Partition						
Survey Niche	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Predicates	Ent 1	Ent 2	Ent 3	Ent 4	Ent 5	Ent 6
Predicate 1	value	value	value	value	value	value
Predicate 2	value	value	value	value	value	value
Predicate 3	value	value	value	value	value	value
Predicate 4	value	value	value	value	value	value
Monitors						
Link to Resource	link 1	link 2	link 3	link 4	link 5	link 6
Survey Monitor 1	value	value	value	value	value	value
Survey Monitor 2	value	value	value	value	value	value
Modify	U6					Survey
Drag and drop columns or rows to reorganize table Scroll to see more rows or columns (scroll bars not shown) Check box <input checked="" type="checkbox"/> at top of column(s) to select Partition(s)_ or entities						

FIG. 22

FIG. 23



Survey Niche Manager

Survey Niche	Source	Mandatory
Predicates		
Predicate 1	U/T	Y/N
Predicate 2	U/T	Y/N
Predicate 3	U/T	Y/N
Predicate 4	U/T	Y/N
Examples		
Example Entity 1	U/T	Y/N
Example Entity 2	U/T	Y/N
Monitors		
Survey Monitor 1	U/T	Y/N
Survey Monitor 2	U/T	Y/N

Source: U=User, T=Transformation
 Select a predicate or monitor, then the appropriate button.
 To add a predicate or monitor, type it into an empty cell.
 To remove a predicate or monitor, delete it from the cell.

Buttons:

- U4**: Points to the first empty cell in the Predicate row.
- U15**: Points to the first empty cell in the Examples row.
- U16**: Points to the "View Ontology" button.
- U17**: Points to the "Transform this" button.
- U18**: Points to the "Mandatory" button.
- U19**: Points to the "Bind" button.
- U13**: Points to the "Undo" button.
- U14**: Points to the "OK" button.
- U2**: Points to the "Survey" button.

FIG. 24

Survey Lattice Tables

U23

Survey Niche	Minimal Unsatisfiable Survey Lattice Elements					
Predicates	Min 1	Min 2	Min 3	Min 4	Min 5	Min 6
Predicate 1	Value/null	Value/null	Value/null	Value/null	Value/null	Value/null
Predicate 2	Value/null	Value/null	Value/null	Value/null	Value/null	Value/null
Predicate 3	Value/null	Value/null	Value/null	Value/null	Value/null	Value/null
Predicate 4	Value/null	Value/null	Value/null	Value/null	Value/null	Value/null

U7

U24

Survey Niche	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Predicates	Max 1	Max 2	Max 3	Max 4	Max 5	Max 6
Predicate 1	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Predicate 2	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Predicate 3	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Predicate 4	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

Monitors						
# of Entities	Value	Value	Value	Value	Value	Value
Survey Monitor 1	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction
Survey Monitor 2	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction	Null/Stats/abstraction

Entities for Selected Max

Survey Niche	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Predicates	Ent 1	Ent 2	Ent 3	Ent 4	Ent 5	Ent 6
Predicate 1	value	value	value	value	value	value
Predicate 2	value	value	value	value	value	value
Predicate 3	value	value	value	value	value	value
Predicate 4	value	value	value	value	value	value

Monitors						
Link to Resource	link 1	link 2	link 3	link 4	link 5	link 6
Survey Monitor 1	value	value	value	value	value	value
Survey Monitor 2	value	value	value	value	value	value

Modify

U6

U2

Survey

Drag and drop columns or rows to reorganize table
 Scroll to see more rows or columns (scroll bars not shown)
 Check box at top of column(s) to select Partition(s) or entities

FIG. 25

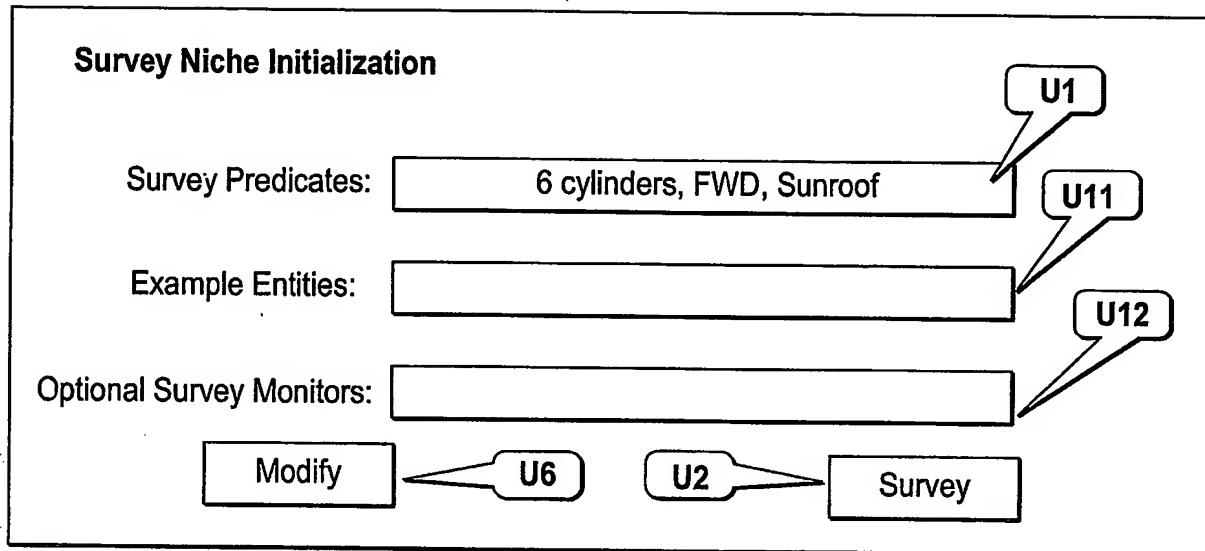


FIG. 26

Sports Car Survey Lattice Tables

Survey Niche		Minimal Unsatisfiable Survey Lattice Elements			U25
Predicates	Min 1	Min 2	Min 3		
6 cylinders	6 cyl				
8 cylinders	8 cyl		8 cyl		
Front Wheel Dr		FWD	FWD		
Real Wheel Dr		RWD			
Sunroof					

Maximal Satisfiable Survey Lattice Elements				U26
Survey Niche	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Predicates	Max 1	Max 2	Max 3	
6 cylinders	Y	Y	N	
8 cylinders	N	N	Y	
Front Wheel Dr	Y	N	N	
Real Wheel Dr	N	Y	Y	
Sunroof	Y	Y	Y	

Monitors				U27
# of Entities	2	2	3	

Entities for Selected Max = Max 3				U27
Survey Niche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Predicates	Ent 1	Ent 2	Ent 3	
6 cylinders	N	N	N	
8 cylinders	Y	Y	Y	
Front Wheel Dr	N	N	N	
Real Wheel Dr	Y	Y	Y	
Sunroof	Y	Y	Y	
Monitors				
Link to Resource	link 1	link 2	link3	
Name	Aston Martin	Jaquar	Lexus	
Primary Key	63225	89725	42895	

Modify
U6
U2
Survey

Drag and drop columns or rows to reorganize table
 Scroll to see more rows or columns (scroll bars not shown)
 Check box at top of column(s) to select Partition(s) or entities

FIG. 27

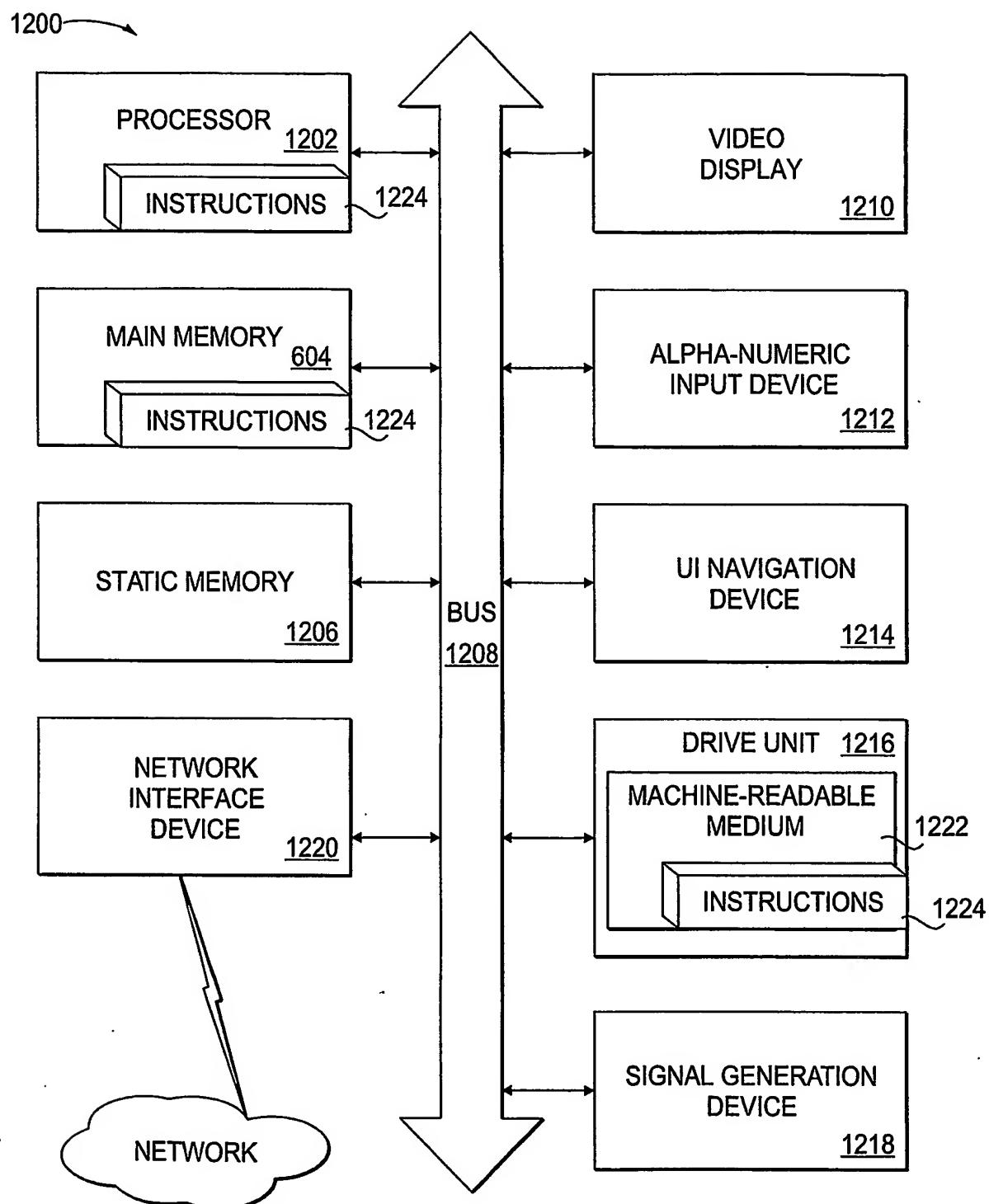


Fig. 28

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